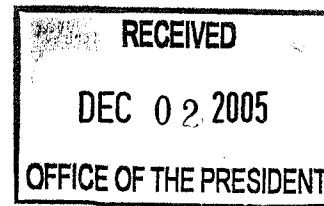




Maricopa County
Air Quality Department



November 30, 2005

The Honorable Ken Bennett, Senate President
Arizona State Senate
1700 W. Washington Street
Phoenix, AZ 85007

SUBJECT: Fiscal Year 2005 Voluntary Vehicle Repair and Retrofit Program Annual Report

Dear President Bennett:

Enclosed is the 2005 Voluntary Vehicle Repair and Retrofit (VVR&R) Program Final Report. This report is submitted in accordance with ARS §49-474.03. The VVR&R Program repaired its first vehicle in January 1999. Since that time, through the end of FY05, Maricopa County has repaired and/or retrofitted 6,395 high-emitting vehicles. The County has disbursed approximately \$3.1 million on repairs and/or retrofits. The resulting cost effectiveness calculations, completed using the formulas supplied and approved by the Arizona Department of Environmental Quality indicate the program is spending approximately \$875 per metric ton of pollution reduction. This cost is annualized over two years; it is assumed benefits, though paid for in one year, will be realized over two or more years.

The VVR&R Final Report for FY05 will also be available on the Air Quality Department website at <http://www.maricopa.gov/AQ/vvrr.asp>.

Should you have any questions regarding the program or this fiscal year-end report, please contact me at 602-506-6936.

Sincerely,

Neil Yockey
Environmental Program Manager
Voluntary Vehicle Repair and Retrofit

Enclosure



Maricopa County
Air Quality Department

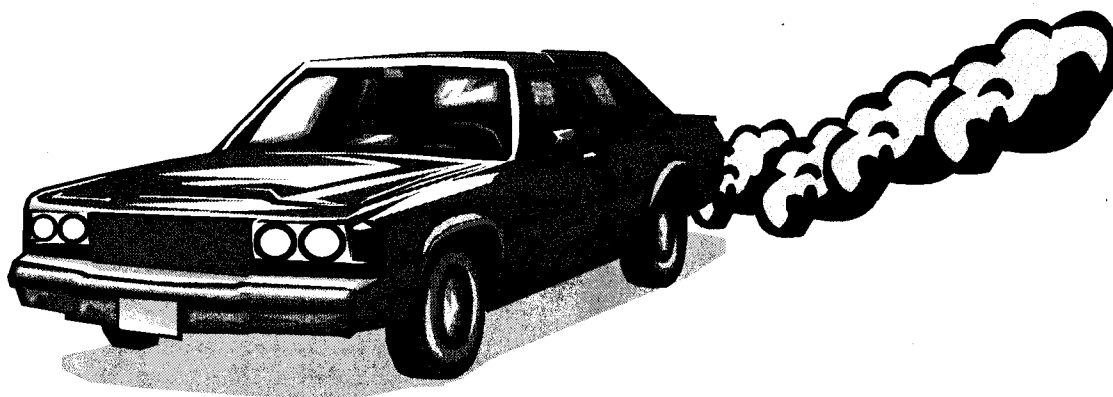
Voluntary Vehicle Repair & Retrofit Program

FY 2004/2005

Annual Report

July 1, 2004 – June 30, 2005

ADEQ Contract EV05-0013



Voluntary Vehicle Repair & Retrofit Program

1001 North Central Avenue, Suite 500

Phoenix, Arizona 85004

Telephone: (602) 506-6750 Facsimile: (602) 506-7303

Web: <http://www.maricopa.gov/aq/vrr.asp>



Executive Summary

The results reflected within the FY05 Annual Report (July 1, 2004 – June 30, 2005) for Maricopa County's Voluntary Vehicle Repair and Retrofit (VVR&R) Program will indicate the overall success of the program. The VVR&R Program achieves its goal of reducing vehicle emissions in a cost-effective manner. The program offers the citizens of Maricopa County owning qualified, high-emitting vehicles the option to voluntarily repair and/or retrofit their older vehicles with newer emissions technology.

Summary of Results

	FY05 1 st Qtr	FY05 2 nd Qtr	FY05 3 rd Qtr	FY05 4 th Qtr	FY05 Total	FY04 Total
Average Amount Spent by Customers & Maricopa County Per Vehicle Repaired	\$768	\$757	\$746	\$766	\$760	\$734
Average Amount Spent by Maricopa County Per Vehicle Repaired	\$515	\$511	\$523	\$512	\$517	\$499
Total Number of Vehicles Repaired	266	183	259	229	937	839
Number of Vehicles with Retrofit Kits Installed	10	6	8	4	28	19
Total Amount Spent by Customers & Maricopa County for Vehicles Repaired	\$204,265	\$138,579	\$193,201	\$173,629	\$709,674	\$615,627
Total Amount Spent by Maricopa County for Vehicles Repaired	\$136,194	\$93,596	\$135,560	\$116,010	\$482,112	\$418,965
Administrative Costs	\$38,826	\$33,002	\$19,324	\$40,285	\$131,437	\$168,609

Emissions Reductions

Basic Idle & Loaded Testing

Emissions reduction calculations vary depending on the type of test used. Older vehicles (1967 – 1980) and some newer trucks use the basic idle and loaded methods for emissions testing. Unfortunately, no formula is available to determine cost effectiveness of emission reductions with these select vehicles. This is due to how hydrocarbons and carbon monoxide are measured. However, in the chart below the average percent of emissions reduction for each pollutant is calculated.

	Idle Test		Loaded Test	
	HC	CO	HC	CO
1 st Quarter FY05	63%	67%	61%	80%
2 nd Quarter FY05	68%	70%	70%	52%
3 rd Quarter FY05	67%	72%	65%	82%
4 th Quarter FY05	68%	77%	71%	77%
FY05 – Total	67%	71%	66%	77%
FY04 – Total	74%	65%	66%	75%

Emissions Reductions

IM Testing

Newer vehicles (1981–1993) calculate emissions using the IM test method. The grid below shows the average percent reduction in pollutants:

	HC	CO	NOx
1 st Quarter FY05	79%	84%	51%
2 nd Quarter FY05	74%	84%	54%
3 rd Quarter FY05	75%	84%	54%
4 th Quarter FY05	74%	82%	53%
FY05 Total	75%	83%	53%
FY04 Total	74%	82%	52%

Because the IM test measures each pollutant in grams per mile, a cost effectiveness formula can be applied. The following chart factors the metric tons of emissions savings and the average miles driven.

	FY05 1 st Qtr	FY05 2 nd Qtr	FY05 3 rd Qtr	FY05 4 th Qtr	FY05 Total	FY04 Total
Metric Tons Reduced	77	52	62	60	251	212
Maricopa County Cost Per Metric Ton	\$799	\$825	\$981	\$896	\$871	\$889
Customer & Maricopa County Cost Per Metric Ton	\$1,194	\$1,211	\$1,394	\$1,341	\$1,279	\$1,300

Costs are annualized over two years, assuming the VVR&R Program's benefits will be realized over at least that length of time. In comparison with other programs, it is generally assumed that an emissions reduction program is cost effective if a metric ton of emissions reduction costs \$2,000.

Customer Satisfaction

Each customer is given a self-addressed, stamped survey postcard after their vehicle is repaired. The customers rank the repair process and the service of the repair facility using the following scale:

- 1- Extremely Disagree
- 2- Disagree
- 3- No Opinion/Okay
- 4- Agree
- 5- Extremely Agree

Of the 937 vehicles repaired and/or retrofitted during FY05, 307 customers had completed and returned surveys resulting in a 32.8% response rate. The following chart indicates the average response rates, by question, from those surveys.

Question	Average Score
When I called, the Program was thoroughly explained to me.	4.58
My experience with the repair facility was satisfactory	4.72
I am satisfied with the repairs made to my vehicle.	4.71

Vendor repair facilities and Kachina Automotive are to be commended for their collective FY05 efforts in support of the program objectives.

Vehicle Repair Summary

The total number of vehicles repaired along with the number of retrofit kits installed are detailed in the grid below for FY05 (July 2004 – June 2005) and for the program (July 2000 – June 2005).

Vehicle Year	Number of Vehicles Repaired		Number of Retrofit Kits Installed	
	FY05	Program	FY05	Program
1967	6	22		
1968	4	18		
1969	4	21		
1970	3	17		
1971	2	16		
1972	4	34		
1973	4	31		
1974	4	28		
1975	1	21		13
1976	7	43	3	20
1977	7	42	4	20
1978	12	69	9	44
1979	13	80*	6	57
1980	8	54	6	33
1981	18	125		2
1982	21	124		
1983	29	204		1
1984	32	269		2
1985	63	410		
1986	73	599		
1987	71	565		1
1988	82	540		1
1989	91	501		2
1990	103	422		
1991	98	255		
1992	117	163		
1993	60	60		
Total	937	4,733	28	196

*Includes one diesel subject to the opacity test.

Program Summary

	Dates	Number of Vehicles Repaired	Number of Retrofit Kits Installed	Metric Tons/Year Reduced	Cost Per Metric Ton
Pilot Program	1/99 – 6/00	1,662	37	425	\$591
Current Program	7/00 – 6/05	4,733	196	1,193	\$875

Funding History

Year	Amount	Source
Pilot	\$640,000	SB1427
FY01	\$1,920,000	SB1504
FY01	\$92,800	ADEQ's Catalytic Converter Replacement Program
FY02	\$320,000	HB2538
FY03	-0-	HB2538 Allocation removed during Special Legislative Session
FY04	\$399,534	ADEQ Contract 99-0089 Amendment #7
FY05	\$725,000	ADEQ Contract EV05-0013

Accomplishments in FY05

- Installed a new Program Manager
- Received ADEQ Contract Renewal for FY06
- Renewed Kachina Automotive Agreement for FY06
- Reassembled the Advisory Committee
- Replacement appointment of an Advisory Committee Member
- Renewal appointments of three Advisory Committee Members
- Installed new VVR&R Program banners at testing and repair facilities
- Distributed promotional pens highlighting program
- Conducted Quarterly Meetings with repair facilities and Kachina Automotive
- Implemented various procedural and policy improvements
- Submitted MVD Electronic Access Agreement to ADOT
- Developed simplified customer formats to attain MVD records
- Transitioned VVR&R Program to new Air Quality Department
- Advance planning for relocation of program offices
- Updated and circulated revised Customer Comment Cards
- Updated website and Helpline scripting
- Updated VVR&R promotional Fact Sheet
- Reconfirmed that Neutronics Retrofit Kit is accredited by CARB
- Reconfirmed that Kachina Automotive is exclusive distributor for Neutronics

Program Parameters

In order to qualify for the program, vehicles must meet the following criteria established by ARS § 49-474.03 and the VVR&R Program's Advisory Committee:

- The owner must be willing to participate and the vehicle must be functionally operational
- The vehicle must be titled in Arizona
- The vehicle must have been registered during the immediately preceding 12 months. It cannot have been unregistered for more than 60 days
- The vehicle must have failed a required emissions test in the "Emissions Inspection Results" within the past 60 days; failures in the "Equipment or Pressure & Purge Inspection Results" are not eligible
- The emissions control system has not been tampered with, removed, or disabled
- Work must be done at a participating garage
- One vehicle per owner
- Motor homes, motorcycles, salvage vehicles and fleet vehicles are not eligible
- If the vehicle is eligible for a retrofit kit (most 1975-1980 vehicles and some newer model year trucks), one must be installed
- There are no reimbursements available for work already done
- Some vehicles may not be eligible for assistance if they are in extremely poor condition

Process

The primary method of communication regarding this program is located on various pamphlets people receive as they proceed through the registration and emissions testing process. Information on the program is included on the pamphlet entitled "Car Care – Important Emissions Testing Information" which is sent to all owners due to re-register their vehicles.

If they fail the emissions test, customers receive a pamphlet from the emissions station entitled "Car Care – Failed Vehicle Information." In addition, banners have been installed at each of Maricopa County's thirteen testing stations. Customers may call the VVR&R helpline or go directly to the website to find a participating repair facility.

When customers take their vehicle to the repair facility, they bring their title, current proof of registration, and the emissions failure notice. Customers sign an agreement sheet and a diagnostic is performed. The customers are informed about necessary repairs and associated costs. If customers continue in the program, they pay the first \$150 to the repair facility. Maricopa County Environmental Services Department pays an additional \$550 for repairs to address the specific emission failure or an additional \$650 for repair and retrofit kit installation. If the cost to bring the vehicle to emission standards exceeds these amounts, owners may pay the additional money or withdraw their vehicle from the program. If they choose to withdraw from the program, they are charged a \$50 diagnostic fee.

Repairs generally take a day, after which the mechanic takes the vehicle to an emission station to obtain a pass notice. The facility forwards all paperwork (invoices with balances noted, copies of title, registration, failure and pass notices) to Kachina Automotive. Kachina Automotive then submits copies of this information, along with a final invoice, to the County. The County pays Kachina who then distributes payment to each repair facility.

Checks & Balances

A system of checks and balances has been established, with the help of the State of Arizona Waiver Facilities, to ensure repairs are properly completed as indicated on the invoices and that funds are spent appropriately. Each customer is issued a self-addressed, stamped postcard with survey questions on the process and the service. This Question and Comment Survey provides the Program with immediate feedback.

Should a customer call with a complaint, they may be referred to a waiver station. There, technicians compare the invoiced repairs with the actually work completed and to test the vehicles to be sure they are passing the emissions test. Repaired vehicles consistently receive positive reports from the waiver stations. Any vehicle not receiving a positive report would be promptly referred back to the originating repair facility for any required fix; without exception, vehicles have been satisfactorily repaired.

Retrofit Kits

The retrofit kits utilized in this program are supplied by Neutronics Enterprises, Inc. The kit converts vehicles originally built with open loop carburetor or fuel injection systems and oxidation catalysts into closed-loop (feedback) systems with three-way catalysts. The Neutronics representative in Maricopa County is Kachina Automotive Equipment, Inc., responsible for maintaining an inventory of the retrofit kits.

Authorized Repair Facilities

Maricopa County subcontracts with Kachina Automotive to oversee all aspects of the selection and training of the authorized repair facilities. The VVR&R Program currently has six, authorized repair facilities in metropolitan Phoenix. They are located in Avondale, Mesa, Central Phoenix, North Phoenix, North-East Phoenix, and Central-West Phoenix.

Advisory Committee

The Advisory Committee, established under ARS § 49-588.34, meets as needed to advise and make recommendations on the development and implementation of the VVR&R Program. Members include representatives from the Arizona Department of Transportation, the Arizona Department of Environmental Quality, automobile hobbyists, and the automotive aftermarket products industry.

July 2004 - June 2005

FY05/ Cumulative Quarters Jul 2004 - Jun 2005

	Total # of Vehicles	Total Before (grams/mile)				Total After (grams/mile)				Total Reduction (grams/mile)				Total Reduction (%)				Average Miles per Year*
		HC	CO	Nox		HC	CO	Nox		HC	CO	Nox		HC	CO	Nox		
Total	845	1,729.79	32,702.43	2,283.30		425.06	5,454.83	1,067.84		1,304.73	27,247.60	1,215.46		75.43	83.32	53.23		107,517
1981	18	63.10	1,415.63	39.28		12.57	243.45	24.93		50.53	1,172.18	14.35		80.08	82.80	36.53		5,997
1982	19	60.48	1,060.60	56.76		16.52	244.55	32.39		43.96	816.05	24.37		72.69	76.94	42.94		6,308
1983	29	85.78	1,938.94	85.11		19.52	273.22	50.78		66.26	1,665.72	34.33		77.24	85.91	40.34		6,636
1984	32	87.14	1,953.38	83.09		19.33	289.45	57.02		67.81	1,663.93	26.07		77.82	85.18	31.38		6,980
1985	58	177.71	3,826.41	166.53		44.23	697.30	103.52		133.48	3,129.11	63.01		75.11	81.78	37.84		7,342
1986	71	176.29	3,706.75	158.10		44.24	519.43	98.07		132.05	3,187.32	60.03		74.90	85.99	37.97		7,723
1987	70	129.88	2,578.33	214.45		34.94	445.53	93.55		94.94	2,132.80	120.90		73.10	82.72	56.38		8,124
1988	82	174.52	2,929.08	203.26		41.41	553.04	90.84		133.11	2,376.04	112.42		76.27	81.12	55.31		8,546
1989	91	177.34	3,723.13	236.84		46.05	599.58	119.44		131.29	3,123.55	117.40		74.03	83.90	49.57		8,989
1990	102	167.84	3,074.77	286.51		38.41	435.36	115.80		129.43	2,639.41	170.71		77.12	85.84	59.58		9,456
1991	97	159.52	2,416.22	252.96		36.49	405.09	95.90		123.03	2,011.13	157.06		77.13	83.23	62.09		9,947
1992	117	170.09	2,618.65	337.62		49.45	515.14	131.62		120.64	2,103.51	206.00		70.93	80.33	61.02		10,463
1993	59	100.10	1,460.54	162.79		21.90	233.69	53.98		78.20	1,226.85	108.81		78.12	84.00	66.84		11,006

* For ease in calculations, only light duty gas vehicle mileage is used.
This information is generated from the Mobile6 model.

The numbers highlighted in blue are entered from the IM147 report from SQL
The numbers highlighted in red are calculated numbers entered into the qtr'ly/annual reports

July 2004 - June 2005

Total Reduction (metric tons/year)				Total Reduction Per Vehicle Year (metric tons/year)		Maricopa County Costs			Total Cost (County + Customer)		
HC	CO	Nox				Total Cost Per Vehicle Year	Cost Per Metric Ton**	Average Cost of Repair	Total Cost Per Vehicle Year	Cost Per Metric Ton**	Average Cost of Repair
11	229	11		250.88		437,065.41	\$871.08	\$517.24	642,049.41	\$1,279.62	\$759.82
0.30	7.03	0.09		7.42		9,467.96	\$638	\$526	14,036.11	\$946	\$780
0.28	5.15	0.15		5.58		8,949.41	\$802	\$471	12,038.40	\$1,079	\$634
0.44	11.05	0.23		11.72		14,494.94	\$618	\$500	21,591.17	\$921	\$745
0.47	11.61	0.18		12.27		16,256.78	\$662	\$508	26,446.89	\$1,078	\$826
0.98	22.97	0.46		24.42		30,717.83	\$629	\$530	47,556.67	\$974	\$820
1.02	24.62	0.46		26.10		36,135.00	\$692	\$509	53,789.10	\$1,030	\$758
0.77	17.33	0.98		19.08		36,084.51	\$946	\$515	52,404.33	\$1,373	\$749
1.14	20.31	0.96		22.40		42,428.75	\$947	\$517	64,029.79	\$1,429	\$781
1.18	28.08	1.06		30.31		47,717.05	\$787	\$524	72,759.40	\$1,200	\$800
1.22	24.96	1.61		27.80		52,812.23	\$950	\$518	75,696.11	\$1,362	\$742
1.22	20.00	1.56		22.79		50,468.33	\$1,107	\$520	72,011.84	\$1,580	\$742
1.26	22.01	2.16		25.43		60,796.81	\$1,196	\$520	87,488.33	\$1,720	\$748
0.86	13.50	1.20		15.56		30,735.81	\$988	\$521	42,201.27	\$1,356	\$715

Voluntary Vehicle Repair and Retrofit Program

Loaded Emission Reduction Results
From 8/3/2004 Through 6/28/2005

Run Time
10:30 AM

Run Date:
Wednesday, November 30, 2005

Year	Total # Vehicles	Total Before		Total After		Total Reduction		Total After		Maricopa County Costs		Total (County + Cust)	
		HC (ppm)	CO (%)	HC (ppm)	CO (%)	HC (ppm)	CO (%)	HC (ppm)	CO (%)	Total Cost	Avg Cost	Total Cost	Avg Cost
1967	6	2005.00	29.94	727.00	7.97	1278.00	21.97	63.74	73.38	\$2,577.52	\$429.59	\$3,477.60	\$579.60
1968	4	1439.00	18.83	672.00	4.58	767.00	14.25	53.30	75.68	\$1,426.35	\$356.59	\$2,142.65	\$535.66
1969	4	873.00	11.37	389.00	1.36	484.00	10.01	55.44	88.04	\$1,336.76	\$334.19	\$1,955.76	\$488.94
1970	3	1701.00	7.58	734.00	5.50	967.00	2.08	56.85	27.44	\$1,360.02	\$453.34	\$1,810.02	\$603.34
1971	2	349.00	11.45	146.00	0.54	203.00	10.91	58.17	95.28	\$746.83	\$373.42	\$1,046.83	\$523.42
1972	4	1560.00	20.79	532.00	2.83	1028.00	17.96	65.90	86.39	\$1,917.13	\$479.28	\$2,736.18	\$684.04
1973	4	1006.00	13.78	889.00	10.94	117.00	2.84	11.63	20.61	\$2,021.25	\$505.31	\$3,500.20	\$875.05
1974	4	1481.00	5.17	353.00	3.76	1128.00	1.41	76.16	27.27	\$1,610.69	\$402.67	\$2,910.00	\$727.50
1975	1	34.00	0.21	61.00	0.12	-27.00	0.09	-79.41	42.86	\$197.80	\$197.80	\$347.80	\$347.80
1976	7	1393.00	19.83	592.00	4.37	801.00	15.46	57.50	77.96	\$3,447.09	\$492.44	\$4,537.89	\$648.27
1977	7	2083.00	22.32	368.00	2.47	1715.00	19.85	82.33	88.93	\$3,531.40	\$504.49	\$4,899.90	\$699.99
1978	12	2883.00	21.04	674.00	4.05	2209.00	16.99	76.62	80.75	\$7,216.10	\$601.34	\$9,513.74	\$792.81
1979	13	2213.00	31.27	623.00	1.54	1590.00	29.73	71.85	95.08	\$6,725.92	\$517.38	\$12,397.61	\$953.66
1980	8	1943.00	14.04	235.00	0.03	1708.00	14.01	87.91	99.79	\$4,775.47	\$596.93	\$6,029.46	\$753.68
1982	2	227.00	8.03	146.00	2.01	81.00	6.02	35.68	74.97	\$1,097.40	\$548.70	\$1,929.08	\$964.54
1985	5	424.00	8.21	401.00	5.04	23.00	3.17	5.42	38.61	\$2,476.19	\$495.24	\$3,390.58	\$678.12
1986	2	340.00	8.97	206.00	1.58	134.00	7.39	39.41	82.39	\$786.83	\$393.42	\$1,086.83	\$543.42
1987	1	149.00	0.75	12.00	0.00	137.00	0.75	91.95	100.00	\$550.00	\$550.00	\$700.78	\$700.78
1990	1	502.00	0.90	22.00	0.00	480.00	0.90	95.62	100.00	\$549.20	\$549.20	\$699.20	\$699.20
1991	1	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	\$146.27	\$146.27	\$296.27	\$296.27
1993	1	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	\$550.00	\$550.00	\$925.80	\$925.80
Totals:	92	22605.02	254.50	7782.02	58.71	14823.00	195.79	65.57	76.93	\$45,046.22	\$9,477.59	\$66,334.18	\$14,021.89

Voluntary Vehicle Repair and Retrofit Program

Idle Emission Reduction Results

From 8/3/2004 Through 6/28/2005

Run Date:

Wednesday, November 30, 2005

Run Time
10:30 AM

Year	Total # Vehicles	Total Before		Total After		Total Reduction		Total After		Maricopa County Costs		Total (County + Cust)	
		HC (ppm)	CO (%)	HC (ppm)	CO (%)	HC (ppm)	CO (%)	HC (ppm)	CO (%)	Total Cost	Avg Cost	Total Cost	Avg Cost
1967	6	3729.00	38.52	1442.00	10.49	2287.00	28.03	61.33	72.77	\$2,577.52	\$429.59	\$3,477.60	\$579.60
1968	4	2283.00	27.38	903.00	8.48	1380.00	18.90	60.45	69.03	\$1,426.35	\$356.59	\$2,142.65	\$535.66
1969	4	1890.00	23.24	1021.00	6.16	869.00	17.08	45.98	73.49	\$1,336.76	\$334.19	\$1,955.76	\$488.94
1970	3	2053.00	11.61	935.00	6.55	1118.00	5.06	54.46	43.58	\$1,360.02	\$453.34	\$1,810.02	\$603.34
1971	2	752.00	15.64	799.00	1.33	-47.00	14.31	-6.25	91.50	\$746.83	\$373.42	\$1,046.83	\$523.42
1972	4	2305.00	23.80	1187.00	9.58	1118.00	14.22	48.50	59.75	\$1,917.13	\$479.28	\$2,736.18	\$684.04
1973	4	1915.00	21.40	1048.00	12.10	867.00	9.30	45.27	43.46	\$2,021.25	\$505.31	\$3,500.20	\$875.05
1974	4	1981.00	6.76	720.00	7.67	1261.00	-0.91	63.65	-13.46	\$1,610.69	\$402.67	\$2,910.00	\$727.50
1975	1	360.00	4.43	107.00	0.55	253.00	3.88	70.28	87.58	\$197.80	\$197.80	\$347.80	\$347.80
1976	7	3643.00	27.51	915.00	5.48	2728.00	22.03	74.88	80.08	\$3,447.09	\$492.44	\$4,537.89	\$648.27
1977	7	2274.00	15.00	636.00	4.68	1638.00	10.32	72.03	68.80	\$3,531.40	\$504.49	\$4,899.90	\$699.99
1978	12	4393.00	36.97	920.00	8.95	3473.00	28.02	79.06	75.79	\$7,216.10	\$601.34	\$9,513.74	\$792.81
1979	13	5313.00	47.48	1104.00	1.57	4209.00	45.91	79.22	96.69	\$6,725.92	\$517.38	\$12,397.61	\$953.66
1980	8	4015.00	14.08	195.00	0.00	3820.00	14.08	95.14	100.00	\$4,775.47	\$596.93	\$6,029.46	\$753.68
1982	2	731.00	8.02	246.00	2.29	485.00	5.73	66.35	71.45	\$1,097.40	\$548.70	\$1,929.08	\$964.54
1985	5	2706.00	8.16	960.00	7.43	1746.00	0.73	64.52	8.95	\$2,476.19	\$495.24	\$3,390.58	\$678.12
1986	2	276.00	2.30	435.00	3.31	-159.00	-1.01	-57.61	-43.91	\$786.83	\$393.42	\$1,086.83	\$543.42
1987	1	244.00	4.54	25.00	0.55	219.00	3.99	89.75	87.89	\$550.00	\$550.00	\$700.78	\$700.78
1990	1	670.00	0.50	27.00	0.00	643.00	0.50	95.97	100.00	\$549.20	\$549.20	\$699.20	\$699.20
1991	1	285.00	3.86	100.00	0.40	185.00	3.46	64.91	89.64	\$146.27	\$146.27	\$296.27	\$296.27
1993	1	195.00	2.14	127.00	0.42	68.00	1.72	34.87	80.37	\$550.00	\$550.00	\$925.80	\$925.80
Totals:	92	42013.00	343.34	13852.00	97.99	28161.00	245.35	67.03	71.46	\$45,046.22	\$9,477.59	\$66,334.18	\$14,021.89